

### **Abstract**

The invention relates to a method and installation for separation of air by means of cryogenic distillation. According to the invention, all of the air is brought to a high pressure greater than the medium pressure and purified. Part of the purified air flow (11) is cooled in an exchange line (9) and, subsequently, divided into two fractions (13, 15). Each of the fractions expands in a turbine (17, 19), the intake pressure of the two turbines being greater than the medium pressure by at least 5 bars. Moreover, the discharge pressure of at least one of the two turbines is essentially equal to the medium pressure. At least part of the air that was expanded in at least one of the turbines is conveyed to the medium pressure column (100) of a double or triple column. Subsequently, a cold booster (23), which is mechanically connected to one (19) of the expansion turbines, draws the air which was cooled in the main exchange line and releases said air at a temperature greater than the intake temperature. The fluid thus compressed is reintroduced into the main exchange line, in which at least one part of the fluid condenses. In addition, at least one pressurised liquid (25) originating from one of the columns (200) is vaporised in the exchange line at an evaporating temperature and the turbine (17) which is not connected to the cold booster is connected to a booster (5) followed by a cooler.